TOP SECRET

OUT59068

T O P S E C R E T 111500Z CITE [ ] 7731

1966 JUL 11 15 15Z 25X1

11 JUL 1966 25X1

DISTRIBUTION		
Cy No.	Office	Action
1	File	
2	OS	
	ADMIN	
	SEC DR	
	P & DS	
	CSD	
	IPD	
	PD	
	PSD	
	PSD-ICB	
	TID	
	IAD	
	PAG	
	DIAXX-4	
	SPAD	
	NSA-LO	
	DIA-AP	

345

Advance copy
Sanitized

SUBJECT: MEMO ENTITLED "TARGET/IMAGE PLANE TRANSFORMATION AND COORDINATE SYSTEM DEFINITION"

1. THE COORDINATE SYSTEMS AND ORDER OF ROTATIONS AS DEFINED UNDER NPIC-A AND NPIC-B ARE CORRECT.

2. EQUIVALENCE TO THE B MATRIX, AS DEFINED IN SECTION III-C, CAN BE OBTAINED WITH THE PROPER USE OF THE TV AND TO MATRICES. THE PROPER SIGNS OF THE RESPECTIVE ELEMENTS OF THE B MATRIX ARE OBTAINED BY CHANGING THE SENSE OF THE PRIMED ANGLES TO CONFORM TO THE SENSE OF THE UNPRIMED ANGLES, AS YOU HAVE STATED IN THE MEMO.

3. IF, IN FACT, THE CORRELATION DATA IS DEFINED ACCORDING TO THE TRW-G CONVENTION, THEN IT WOULD HAVE BEEN MORE APPROPRIATE TO ADOPT THIS SYSTEM FOR THE BASIC DERIVATION IN SECTION III-C OF THE MEMO. THIS IS THE EQUIVALENCE NEEDED BY USERS OF THE CORRELATION DATA. IRRESPECTIVE, HOWEVER, EQUIVALENCE TO THE TRW-G CONVENTION CAN BE ESTABLISHED BY A SIMILAR METHOD OF APPROACH.

4. CONCERNING OUR MEETING OF 27 JUNE WITH [ ] YOU CONFIRMED 25X1
THE CORRECTNESS OF THE M-GP AND M-MP MATRICES AS DERIVED IN REFERENCE

[ ] THE REASON POSTULATED FOR A REVERSE IN SIGNS OF 25X1

Declassification Review by NGA/DoD

25X1

TOP SECRET

THE ELEMENTS IN THE SECOND ROW OF THE M-GP MATRIX WHEN COMPARED TO
THE B MATRIX ON PAGE 10 OF THE MEMO DATED 4 DECEMBER 1965 WAS
THE DIFFERENCE BETWEEN DERVIATION IN A POSITIVE VERSUS A DERIVATION
IN THE NEGATIVE. IF THIS IS TRUE, THEN WHY IS THE A PRIME MATRIX
ON PAGE 19 OF THE RECENT MEMO IDENTICAL TO THE M-GP MATRIX? A
REVERSE IN SIGNS OF THE ELEMENTS IN THE SECOND ROW WOULD BE
EXPECTED IF DERIVATION IS IN THE NEGATIVE PLANE. REQUEST THAT
CLARIFICATION AND A DOUBLE CHECK ON THE CORRECTNESS OF THE M-GP
MATRIX BE MADE. TRANSFORMATION TO THE IMAGE PLANE USING THE M-GP
MATRIX WOULD BE MADE BY SCALING WITH THE Z-PHOTO COMPONENT EQUATED
TO -F, THE FOCAL LENGTH.
T O P S E C R E T
                              /END OF MESSAGE/